

REMARKS

Applicants' representative thanks the Examiner for the courtesies extended during the telephonic conference on July 10, 2007, with Francis Dunn. During the conference, there was discussion regarding overcoming the rejections of the subject claims, including discussion regarding claims 1, 11, and 23, and more particularly, discussion regarding "a multiple active result set (MARS) header" and "a data field." There was also discussion regarding a proposed amendment to independent claim 1 to emphasize distinctive aspects of the claimed subject matter, including a tabular data stream protocol that includes a chunk format component. The Examiner indicated that an amendment to independent claim 1 to include a chunk format component that included the elements of claims 3 and 29 would produce allowable subject matter, as also indicated by the Examiner in the Office Action dated May 18, 2007.

Claims 1, 2, 4-28, and 30 are currently pending, and claims 1, 2, 4-13, 23, 26-28, and 30 are presently under consideration, in the subject application. Claims 1, 4, 11, 13, and 23 have been amended as shown on pages 2-7 of the Reply. Claims 3 and 29 are canceled herein. No new matter has been added.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 11-13 Under 35 U.S.C. § 102(b)

Claims 11-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Anand, *et al.* (US 5,974,416) ("Anand, *et al.*"). Withdrawal of this rejection is respectfully for at least the following reason. Anand, *et al.* does not disclose each and every element of the subject claims.

For a prior art reference to anticipate, 35 U.S.C. § 102 requires that "***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

The claimed subject matter relates to an enhancement of a Tabular Data Stream (TDS) protocol that can be employed for client-server communication networks. The claimed subject matter can employ a Multiple Active Result Sets (MARS) feature, which can include a data field header, for example. Such data field can identify, to a server, the number of pending requests known by a client, and can thereby facilitate query synchronization, regardless of buffer sizes employed in the client-server communications network. Communicating the number of pending requests known by the client to the server can facilitate synchronizing execution of queries, for example, where the server already has completed processing of previous requests. The claimed subject matter can thereby mitigate inconsistent server behavior related to instances where buffer zones are waiting to be read by the client.

In addition, the claimed subject matter can include a chunk format component that can employ a Partially Length Prefixed (PLP) format to transmit large volumes of data. The chunk format component can provide for a special length designator, which can be sent to a client, and can indicate that the total length of the data stream is not known, and that such data stream can be streamed in several chunks. For example, each chunk can contain the special length designator (e.g., <chunk length>) followed by information associated with chunk bytes (e.g., <bytes of chunk>), where a specific value can be reserved for the special length designator as designation to the client. Thus, data stream packets can have individual data items that are themselves streams of indeterminate length, and transmittal of large data streams can thereby be facilitated.

In particular, independent claim 11, as amended, recites: *the TDS protocol comprising: ... a chunk format component that employs a Partially Length Prefixed (PLP) format to transmit data between the client device and the server device and employs a special length designator that is communicated to the client device and indicates that a total value of a length of a data stream is not known and the data stream is to be transmitted in multiple data stream packets.* Anand, et al., does not disclose this distinctive feature of the claimed subject matter.

It should be noted that claim 11 includes the elements of claim 29 and claim 3 from which claim 29 depends, and the Examiner has indicated that claim 29 would be

allowable if rewritten in independent form with the elements of the base claim and intervening claims. (*See* Office Action dated May 18, 2007, p. 9).

Further, as stated, Anand, *et al.* fails to disclose the distinctive features of claim 11. Rather, Anand, *et al.* discloses a tabular data stream format, specifically, the Advanced Data TableGram (ADTG) format, for the transmission of tabular data between a client and a server. (*See* Abstract). Anand, *et al.* uses the ADTG format to marshal data for transfer between a client and server. (*See* col. 2, lns. 12-16). The marshaled resultsets of database queries, *i.e.*, table rows containing updates made to them by applications, and status information for each row that contained the changes, are converted into an ADTG message. (*See* col. 2, lns. 16-21). In addition to receiving query results from the server, the client updates the database using an ADTG message containing both the updated data and the original data. (*See* col. 3, lns. 5-8). Anand, *et al.* further discloses utilizing tokens, including an adtgHeader token, whose purpose is to establish global parameters for the ADTG message, that may include a field that can indicate the length of the adtgHeader token. (*See* col. 8, lns. 12-22).

However, unlike the claimed subject matter, Anand, *et al.* is silent regarding employing a PLP format to transmit data between a client and server and utilizing a special length designator that is communicated to the client and indicates that the length of the data stream is not known and the data stream will be transmitted in multiple packets. Instead, Anand, *et al.* discloses a token that includes a field that indicates the length of the token. (*See* col. 8, lns. 12-22). However, the token is not the data stream being transmitted, and the field in the adtgHeader token simply provides information regarding the length of the token. Anand, *et al.* also discloses an adtgDone token that can indicate that the end of a resultset or that it is the last token in an ADTG message. (*See* col. 7, lns. 9-30). However, the adtgDone token does not provide length information regarding the data stream or information regarding the number of data packets associated with the data stream to the client.

In contrast, the claimed subject matter can be comprised of a TDS protocol that can include **a chunk format component**. The chunk format component can facilitate transmitting data between a client device and a server device using a **PLP format**. The chunk format component can further employ a special length designator that can be

communicated to the client device, where *the special length designator can indicate that the total length of a data stream is unknown and the data stream can be transmitted in multiple data stream packets*. As a result, data stream packets can have individual data items that are themselves streams of indeterminate length, and transmittal of large data streams can thereby be facilitated.

In view of at least the foregoing, Anand, *et al.* does not disclose each and every element recited in independent claim 11 (and associated dependent claims 12 and 13). Accordingly, it is believed that the subject claims are in condition for allowance, and the rejection should be withdrawn.

II. Rejection of Claims 1-2, 4-9, 23, and 26-28 Under 35 U.S.C. § 103(a)

Claims 1-2, 4-9, 23, and 26-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anand, *et al.* in view of “Database Buffer Size Investigation for OLTP Workloads” issued to Tsuei, *et al.* (“Tsuei, *et al.*”). This rejection should be withdrawn for at least the following reasons. Anand, *et al.* and Tsuei, *et al.*, either alone or in combination, do not disclose, teach, or suggest each and every element of the subject claims. Claims 2, 4-9, and 26-28 depend from independent claim 1, and independent claim 1 includes elements that are similar to the elements of independent claim 11. Further, claim 23 includes elements that are similar to the elements of independent claim 11. Tsuei, *et al.* fails to cure the aforementioned deficiencies of Anand, *et al.* with respect to independent claim 11, and thus fails to cure the aforementioned deficiencies of Anand, *et al.* with respect to independent claims 1 and 23. Rather, Tsuei, *et al.* is related to the determining the impact of buffer size on performance of online transaction processing systems, and teaches that as the buffer size is increased, much more memory is required to obtain the same throughput, and that the optimal memory buffer size is relatively small compared to the size of a database. (See p. 112, *Abstract*; and p. 121, Section 6. Conclusion). Further, it should be noted that independent claims 1 and 23 each include the elements previously included in claim 29 and claim 3 from which claim 29 depends, and the Examiner has indicated that claim 29 would be allowable if rewritten in independent form with the elements of the base claim and intervening claims. (See

Office Action dated May 18, 2007, p. 9). Accordingly, the rejection should be withdrawn.

III. Rejection of Claims 3 and 10 Under 35 U.S.C. § 103(a)

Claims 3 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anand, *et al.* (US 5,974,416) in view of Tsuci, *et al.*, and further in view of Clegg, *et al.* (US 6,356,946) (“Clegg, *et al.*”). This rejection should be withdrawn for at least the following reasons. Anand, *et al.*, Tsuci, *et al.*, and Clegg, *et al.*, either alone or in combination, do not disclose, teach, or suggest each and every element of the subject claims. Further, claim 3 is canceled herein. Claims 10 depends from independent claim 1. Clegg, *et al.* fails to cure the aforementioned deficiencies of Anand, *et al.* and Tsuci, *et al.* with respect to independent claim 1. Rather, Clegg, *et al.* teaches a tabular data stream protocol that includes a “chunked” data type, so that within a data stream the system can have individual data items which are themselves streams of indeterminate length. (*See* col. 4, lns. 7-13). Further, independent claim 1 includes the elements previously included in claim 29 and claim 3 from which claim 29 depends, and the Examiner has indicated that claim 29 would be allowable if rewritten in independent form with the elements of the base claim and intervening claims. (*See* Office Action dated May 18, 2007, p. 9). Accordingly, the rejection should be withdrawn.

IV. Objection to Claims 29 and 30

Claims 29 and 30 stand objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Withdrawal of the objection is respectfully requested in light of the cancellation of claim 29 and the amendments made herein, for example, with respect to independent claim 1.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063[MSFTP619US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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